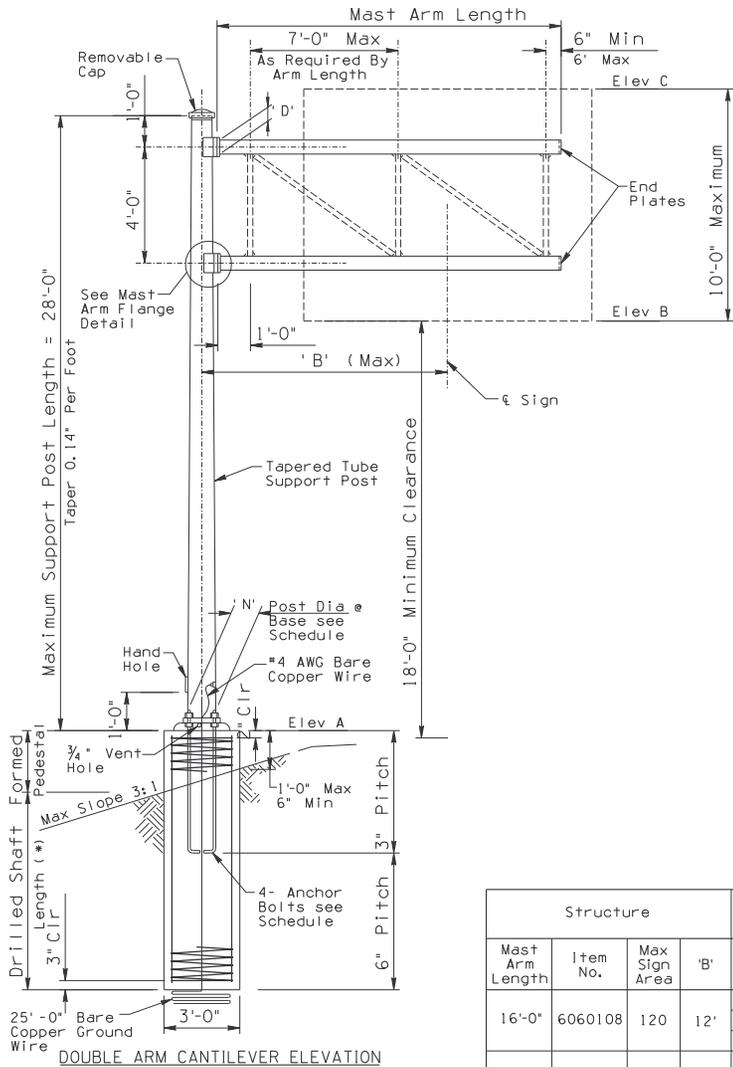


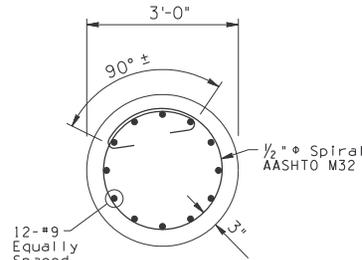
NO	DESCRIPTION OF REVISIONS	MADE BY	DATE
1	ORIGINAL ISSUE	BAKER E&E	6/04
2			
3			
4			



(\*) Drilled shaft foundation is based on uniform soils condition with the following soil parameters: Unit Weight = 120 pcf,  $k = 70$  pci, Angle of internal friction =  $33^\circ$ . Depth or design should be revised by the Project Engineer of Record for weaker soils or rock embedment and shown on the project plans.

**NOTE:**

- Dimension B may be exceeded provided the product of the actual sign area times the distance from  $\xi$  of sign to  $\xi$  of Support Post does not exceed the maximum sign area times B.
- Trussing between Mast Arms not required for 16' Arm Length.



DRILLED SHAFT DETAIL

Mast Arm Length	Drilled Shaft		Anchor Bolt	
	Item No.	Length	Dia.	Length
16'-0"	6060243	14'	1.75"	72"
22'-0"	6060244	16'	2"	84"
34'-0"	6060245	19'	2.25"	84"

Structure				Support Post			Base Plate		
Mast Arm Length	Item No.	Max Sign Area	'B'	Tapered Tube Minimum Yield	Base Outside Diameter 'N'	Wall Thickness	Square 'C'	Bolt Circle 'L'	Thickness 'T'
16'-0"	6060108	120	12'	48.0 ksi	13.5"	0.3125"	19"	19"	1.75"
				55.0 ksi	14"	0.2391"	20"	20"	1.75"
				65.0 ksi	13"	0.25"	19"	19"	1.75"
22'-0"	6060109	150	16'	48.0 ksi	14.875"	0.3125"	21"	21"	1.75"
				55.0 ksi	16"	0.2391"	22"	22"	1.75"
				65.0 ksi	15"	0.25"	21"	21"	1.75"
34'-0"	6060110	180	27'	48.0 ksi	19"	0.3125"	26"	26"	2"
				55.0 ksi	18"	0.3125"	25"	25"	2"
				65.0 ksi	17"	0.3125"	24"	24"	2"

**GENERAL NOTES:**

Construction Specification - Arizona Department of Transportation Standard Specifications for Road and Bridge Construction, Latest Edition.

Design Specifications - AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, Edition of 1994, with 1998 Interims.

All concrete shall be Class "S".

Reinforcing steel shall conform to ASTM Specification A615 (Grade 60).

Structural Steel shall conform to ASTM Specification A36 unless noted otherwise.

Stresses:  
Class "S" concrete .....  $f'c = 3500$  psi  
Grade 60 reinforcing steel .....  $fs = 24000$  psi

Materials:  
Anchor Bolts ..... F 1554, Grade 55  
Connecting Bolts ..... A 325  
Base Plates & Connecting Plates ..... A 36

All bolts, nuts and washers shall be galvanized in accordance with the requirements of ASTM A153. All other steel shall be galvanized after fabrication in accordance with ASTM A123.

Wind Loading: 80 MPH Velocity.

The cantilevered sign structure has been designed for site conditions which are level and neither elevated above the average surrounding terrain by more than 30' nor supported on a bridge.

Tapered tubes shall conform to one of following: ASTM A 36 MOD, ASTM A 283, ASTM A 570, ASTM A 607, ASTM A 1011, ASTM A 595 Grade A, A 572, Grade 65, or equivalent; and have a minimum yield of 48 ksi, 55 ksi, or 65 ksi after fabrication.

Support post and mast arms are not required to be of the same yield strength.

Post heights may be altered by holding the base diameter 'N' constant.

All high strength bolts shall be tightened in accordance with AISC Specifications (turn of nut method or calibrated wrench method) for Structural Joints issued by the Research Council on Riveted and Bolted Structural Joints unless noted otherwise.

Tapered tube members shall be pre-cambered for dead load deflection by manufacturer.

Signs shall be centered vertically between mast arms.

Project Plans shall provide an elevation view of each sign structure with location (station and offset), ELEV. A, ELEV. B, ELEV. C, and Sign panel layout and dimensions.

Bolt hole diameters shall be equal to the bolt diameter +  $\frac{1}{8}$ " unless noted otherwise.

Dimensions shall not be scaled from drawings.

DESIGN APPROVED <b>SIGNATURE ON FILE</b>	ARIZONA DEPARTMENT OF TRANSPORTATION INTERMODAL TRANSPORTATION DIVISION STANDARD DRAWINGS	REV. 7/04
	TAPERED TUBE SIGN STRUCTURE CANTILEVER	DRAWING NO. S-11

SHEET 1 OF 4  
NOT TO SCALE